Historical Development of the Early and curent Atomic Model
Pre-AP

For the following individuals research what they contributed to the discovery and advancement of knowledge of what we consider the modern atom. Treat the activity as a note taking session, as you will need these later to study. You may type out the answers or write them in your notes.

Democritus (400 B.C.) –
What does the Greek word "atomos" mean?
What where his postulates regarding atoms?
Were his thoughts based on the scientific method, why or why not?

John Dalton (1808) –
What are Daltons four main component of atomic theory?
What was his atomic theory based on?
How did atoms combine according to Dalton?

Julios Plucker (1859) –
What major dioscovery did Pluckner make that later lead to the identification of the electron?
How does this aperatous work?
Sketch out a scematic of it function?

G.J. Stoney (1879) – Stoney proposed that electricity was made of what?

Sir William Crookes (1879) – Crookes experiment with a cathode ray led to what being learned about the rays:

1. Direction of travel of ray;
2. Glass does what in current;
3. Something to do with a charged particle;
4. Effect of magnet on field/ ray;
5. Effect on pinwheels showed rays had what?

Eugene Goldstein (1886) –
Goldstein used a cathode ray to find this type of sub atomic particle?
How does the mass of this particle compare to the particle mass of an electron (need a number ration)?

Roentgen (1895) -
While using a cathode ray tube Roentgen observed that nearby chemicals glowed , this way cause by what type of enegy that is not effect by a magnetic field?

Becquerel (1896) – Becquerel made what discovery when he placed a uranium compound he had put into a drawer darkened a photographic film stored in the drawer?
He discovered some chemicals spontaneously _____ and give off _ _____ _ rays.
This discovery supported the idea of a _____ _ atom.

J.J. Thomson (1897-1904) - His experiment with a caythode ray tube lead to the dicovery of what ration (hint C/g)?
What modle of the atom did Thomson propose, draw it out and discribe it? How what this diffent from later modles?

Ernest Rutherford (1898) –
Try to describe Rutherford famous experiment? What where the major findings?
What did he win the Nobel Prize for?
What three particles are he credited with naming and characterizing?

Max Planck (1901) – Plank discovered that energy flowed how?
These where called?
What are the components of a quantum of light fromula, what does each stand for?

Robert Millikan (1909) –
Millikan conducted what classic experiment?
What did this experiment determine?

Erwin Schroedinger (1926) –
Schroedinger used mathematics and statistics and other discoverys to define what student of physics/ chemistry?

James Chadwick (1932) –
Found what subatomic particle?
How what this found?